

CLAIMS

1. A quantum dot-dispersed light emitting device comprising:
a substrate;
an electron injection electrode;
a hole injection electrode; and
an inorganic light emitting layer disposed so as to be in contact with both the electrodes,
wherein the inorganic light emitting layer
includes an ambipolar inorganic semiconductor material and nanocrystals dispersed as luminescent centers in the ambipolar inorganic semiconductor material, and
is configured without having, at the interface with the electron injection electrode and/or the hole injection electrode, epitaxial relation therewith.
2. The quantum dot-dispersed light emitting device according to claim 1,
wherein the ambipolar inorganic semiconductor material is an amorphous semiconductor phase.
3. The quantum dot-dispersed light emitting device according to claim 1,
wherein the ambipolar inorganic semiconductor material is a polycrystal semiconductor phase.
4. The quantum dot-dispersed light emitting device according to any of claims 1 to 3,
wherein the inorganic light emitting layer comprises a ZnS type

semiconductor phase.

5. The quantum dot-dispersed light emitting device according to claim 4,

wherein the inorganic light emitting layer comprises $\text{Zn}_p\text{M}_{1-p}\text{S}_x\text{Se}_y\text{Te}_{1-x-y}$ (where $0 \leq x, y, x + y \leq 1$, $0 < p \leq 1$, M: alkaline-earth metal, Cd).

6. The quantum dot-dispersed light emitting device according to claim 4 or 5,

wherein the nanocrystals contain any of InP, GaAs, and GaP as a main component.

7. The quantum dot-dispersed light emitting device according to any of claims 1 to 3,

wherein the hole injection electrode comprises Cu-doped $\text{Zn}_p\text{M}_{1-p}\text{S}_x\text{Se}_y\text{Te}_{1-x-y}$ (where $0 \leq x, y, x + y \leq 1$, $0 < p \leq 1$, M: alkaline-earth metal, Cd).

8. The quantum dot-dispersed light emitting device according to any of claims 1 to 3,

wherein the substrate is a glass substrate.

9. The quantum dot-dispersed light emitting device according to any of claims 1 to 3,

wherein the electron injection electrode and the hole injection electrode are disposed spaced apart from each other, with the inorganic light emitting layer interposed therebetween, in a lamination on the substrate.

10. The quantum dot-dispersed light emitting device according

to any of claims 1 to 3,

wherein the electron injection electrode and the hole injection electrode are disposed spaced apart from each other in a plane on the substrate.

11. The quantum dot-dispersed light emitting device according to any of claims 1 to 3,

wherein a gate electrode is disposed between the electron injection electrode and the hole injection electrode.

12. A display apparatus comprising the quantum dot-dispersed light emitting device according to any of claims 1 to 3.

13. An illumination device comprising the quantum dot-dispersed light emitting device according to any of claims 1 to 3.